Br J Vener Dis 1982;**58**:206-10

Abstracts

These selected abstracts and titles from the world literature are arranged in the following sections:

Syphilis and other treponematoses (clinical and therapy)

A case of monorecidive syphilitic chancre
SP MEHTA (Special Clinic, Royal Hospital, Wolverhampton, UK) *Sex Transm Dis* 1981;**8**:222-3.

Tabetic lightning pains: High-dosage intravenous penicillin versus carbamazepine therapy
S GIMENÉZ-ROLDÁN AND M MARTIN (Ciudad Sanitaria Provincial, Madrid, Spain) *Eur Neurol* 1981;**20**:424.

Syphilis (serology and biological false-positive phenomenon)

Specificity, sensitivity and reproducibility among the fluorescent treponemal antibody-absorption test, the microhaemagglutination assay for *Treponema pallidum* antibodies, and the haemagglutination treponemal test for syphilis
SA LARSEN, EA HAMBLE, DE PETTIT, *ET AL* (Center for Disease Control, Atlanta, GA, USA). *J Clin Microbiol* 1981;**14**:441-5.

Serodiagnosis of syphilis (lues)
F MULLER (Hamburg, Germany). *Bakt Mikrobiol Hyg-A-Med* 1981;**250**:1-8.

Syphilis (pathology and experimental)

Isolation of a heat stable antigen from *Treponema* Reiter using an immunoadsorbent with antibodies from syphilitic patients
NS PEDERSON, CS PETERSEN, NH AXELSEN, *ET AL* (Statens Seruminstitut, Copenhagen, Denmark). *Scand J Immunol* 1981;**14**:137-44.

In-situ identification of mononuclear cells in cutaneous infiltrates in discoid lupus erythematosus, sarcoidosis, and secondary syphilis
JR BJERKE, H-K KROGH, AND R MATRE (University of Bergen, Norway). *Acta Derm Venereol* 1981;**61**:371-80.

Pathogenesis and immunology of *Treponema pallidum*
TJ FITZGERALD (University of Minnesota, Duluth, Minnesota, USA). *Ann Rev Microbiol* 1981;**35**:29-54.

Effect of cortisone administration on host-parasite relationships in early experimental syphilis
SA LUKEHART, SA BAKER-ZANDER, RM CHERI LLOYD, AND S SELL (Department of Pathology, School of Medicine, University of California, San Diego, La Jolla, CA, USA). *J Immunol* 1981;**127**:1361-8.

Experiments were carried out to investigate the action of cortisone acetate on experimental syphilis in rabbit testes during the three phases of orchitis development: (a) before lymphocyte sensitisation and cellular infiltration; (b) after lymphocyte sensitisation but before bacterial clearance; and (c) after bacterial clearance from the site of infection. Four of six groups of New Zealand white rabbits were each infected intratesticularly with 8×10^7 *T pallidum*/testis. The first two groups (A and B) were used as controls: A received no steroids and B were given cortisone acetate 20 mg/day intramuscularly. The infected groups (D, E, and F) were given cortisone acetate on days 0-6, 7-13, and 21-27 respectively. Group C, although infected, had no steroids and acted as another control group.

Rabbits were killed at weekly intervals, and the spleen, testes, inguinal and popliteal lymph nodes, and blood were all examined. The sera were tested by the VDRL and FTA-ABS tests. The spleen and lymph nodes were both used for lymphocyte stimulation tests and the testes sectioned for immunofluorescent staining.

The results showed that cortisone suppressed the VDRL titres but that the titres regained the values of group C rabbits within three days (group D) or one week (groups E and F). The FTA-ABS test showed a delay in antibody development in group D, a small drop in titres in group E between days 14 and 21, and no apparent effect from steroids in group F. The lymphocyte stimulation tests with *T pallidum* antigen showed a delay in appearance of sensitised spleen cells in group D, an ablation in response in group E, and a reduction in sensitised cells in group F. In

each group responsiveness recurred seven days after treatment, although in group D it took longer to return completely to the values of group C. Histological examination of the testes in group C supported the findings previously reported by the same authors.[1] They used the same double antibody technique to detect *T pallidum*, T lymphocytes, and IgG in sections of the testes from the rabbits in groups D, E, and F. Group D rabbits showed T lymphocytes on day 10, which had diminished in number on day 14. Treponemes were present on day 7 and day 14. In group E the local inflammatory response was present at the time of the first cortisone injection; it was noticeably less at the end of the course, with many fewer lymphocytes than in group C. Treponemes were found on day 17 and were still present on day 28, by which time the group C animals showed very few treponemes at all.

Foamy macrophages stained with haematoxylin and eosin also gave a strongly positive immunofluorescent response for *T pallidum*, implying ingestion of the organism as a means of clearance from the site of infection. Their appearance was delayed by the cortisone administration. Group F animals were given cortisone when the local inflammatory response was diminished with very few treponemes present in the testes. Immediately after the cortisone course (day 28) focal accumulations of *T pallidum* could be found. Fibroblasts which had previously been present began to loosen by day 35, when an increase in T lymphocytes was noted together with larger numbers of treponemes.

The authors discuss their findings with reference to earlier work on the subject. As in their previous papers, the photomicrographs are of very good quality.

1. Lukehart SA, Baker-Zander SA, Cheri Lloyd RM, Sell S. *J Immunol* 1980;**124**:461-7.

G D Morrison

Gonorrhoea (clinical)

Gonococcal carriage in the throat; no common findings anyhow? Absence of *Neisseria gonorrhoeae* in the pharynges of 158 repeatedly swabbed young men

HC KORTING (Ernst Rodenwaldt Institute, Koblenz, Federal German Republic). *Dermatologica* 1981;**163**:249-54.

Gonorrhoea (microbiology)

Application of a limulus test device in rapid evaluation of gonococcal and non-gonococcal urethritis in males

RB PRIOR AND VA SPAGNA (Ohio State University College of Medicine, Columbus, USA). *J Clin Microbiol* 1981; **14**:256-60.

The limulus amoebocyte lysate (LAL) assay depends on the principle that washed amoebocytes of the horseshoe crab, *Limulus polyphemus*, will form a gel in the presence of nanogram quantities of bacterial endotoxin. Endotoxin in urethral exudates from men with gonococcal urethritis can also give a positive LAL assay result. This paper evaluates a test device developed to simplify and standardise the collection, dilution, and testing of urethral exudates. The test device consists of a syringe for collecting specimens, a sealed dilution reservoir containing 10 ml pyrogen-free water, and a lysate single-test vial. The dilution reservoir contains a frangible membrane, which is broken before use. The sample is collected from the urethral meatus by gentle aspiration until the exudate fills the syringe-tip from one half to full (approximately 0·015 to 0·025 ml). The syringe is then affixed to the dilution reservoir and the sample expressed into the reservoir. After adequate mixing 0·25 ml of the diluted sample is removed and transferred to the assay vial with the collecting syringe. The vial is incubated at 37°C for 30 minutes before the test result is read.

Five hundred and fifty men with uncomplicated exudative urethritis were included in the evaluation of the device. After exudate for the assay had been collected, samples were also collected for Gram staining and culture of *Neisseria gonorrhoeae*. Of the 550 men, 366 had positive culture results for *N gonorrhoeae* and 184 negative results. On the basis of culture results the sensitivity with the LAL device was 99·2% and the specificity 96·7%: the corresponding values with Gram stain were 96·4% and 99·5%. There were no statistically significant differences between the LAL assay and the Gram stain in predicting culture result ($P>0·05$). The value of the device is discussed in relation to the practising physician in the private sector in the United States. (Since Gram-staining of urethral exudate gives rapid reliable results and is inexpensive, there is little need for the LAL device in the presumptive diagnosis of gonococcal urethritis in men attending STD clinics in Britain.).

H Young

Evaluation of the limulus amoebocyte lysate assay for the presumptive diagnosis of gonorrhoea in men at a clinic for sexually transmitted diseases

TA CHAPEL, M ADCOCK, B SMITH, *ET AL* (Wayne State University School of Medicine, Detroit, USA). *Sex Transm Dis* 1981;**8**:175-8.

Gonococcal pilus vaccine—studies of antigenicity and inhibition of attachment

EC TRAMONT, JC SADOFF, JW BOSLEGO, *ET AL* (Walter Reed Army Institute, Washington DC, USA). *J Clin Invest* 1981;**68**:881-9.

Antibiotic susceptibility of *Neisseria gonorrhoeae* in relation to serogroups

S BYGDEMAN (Karolinska Institute, Stockholm, Sweden). *Acta Pathol Microbiol Scand* 1981;**89**:227-38.

Antibiotic susceptibility testing of *Neisseria gonorrhoeae* by disc agar diffusion

JY RIOU, M GUIBOURDENCHE, AND P COURVALIN (Institute Pasteur, Paris, France). *Ann Microbiol* 1981;**132**:41-50.

Survey of *Neisseria gonorrhoeae* sensitivity to antibiotics by dilution and diffusion methods using a new medium

E DELBEKE, J CHAMBON, D SICARD, *ET AL* (Faculty of Medicine and Chemistry, Vallombrose, Nice, France). *Ann Microbiol* 1981;**132**:51-7.

Some properties of the human erythrocyte receptors for *Neisseria gonorrhoeae*

GM WISEMAN, P McNICOL, CJ LIAN, AND DS PRIMROSE (University of Manitoba School of Medicine, Winnepeg, Canada). *Can J Microbiol* 1981;**27**:1035-47.

Degradation of gonococcal outer membrane proteins by human neutrophil lysosomal proteases

RF REST AND E PRETZER (Arizona Health Science Center, University of Arizona, Tucson, AZ, USA). *Infect Immun* 1981; **34**:62-8.

Enzyme linked immunosorbent assay (ELISA) to detect antibodies in gonorrhoea using whole cells

CA ISON, SG HADFIELD, AND AA GLYNN (Central Public Health Laboratory, Colindale, London, UK). *J Clin Pathol* 1981;**34**:1040-3.

Intraspecific and intergeneric mobilisation of non-conjugative resistance plasmids by a 24·5 megadalton conjugative plasmid of *Neisseria gonorrhoeae*
F FLETT, GO HUMPHREYS, AND JR SAUNDERS (Department of Biochemistry, University of Manchester Institute of Science and Technology, Manchester, UK). *J Gen Microbiol* 1981; **125**: 123-30.

Serological classification of *Neisseria gonorrhoeae* by coagglutination: a study of serological patterns in two geographical areas of Sweden
S BYGDEMAN, D DANIELSSON, AND E SANDSTRÖM (Department of Clinical Bacteriology, Sodensjukhuset, Stockholm, Sweden). *Acta Derm Venereol* 1981; **61**: 423-8.

Gonorrhoea (therapy)

Treatment of uncomplicated gonorrhoea with cefotaxime
HH HANDSFIELD AND KK HOLMES (University of Washington, Harborview Medical Center, Seattle, USA). *Sex Transm Dis* 1981; **8**: 187-91.

Cefuroxime therapy of gonorrhoea and coinfection with *Chlamydia trachomatis* in children
P PATAMASUCON, PJ RETTIG, AND JD NELSON (University of Texas Health Science Center, Dallas, Texas, USA). *Pediatrics* 1981; **68**: 534-8.

Twenty-seven episodes of gonorrhoea occurring in children under 15 years of age were treated with intramuscular injections of cefuroxime 25 mg/kg body weight. Gonococci were eliminated from genital, pharyngeal, and anal sites in all cases. Cefuroxime was well tolerated and no side effects were observed. Concomitant infection with *Chlamydia trachomatis* was found in nine (33%) patients. Of the seven patients with chlamydial genital infection, postgonococcal symptoms persisted in three (43%). One of the five patients with chlamydial anal infection had symptoms. Chlamydial infections were successfully treated with trisulfapyrimidines.

Authors' summary

Non-specific genital infection

Incidence of *Ureaplasma urealyticum* infection in women attending a clinic for sexually transmitted diseases
H YOUNG, S TUACH, AND SSR BAIN (Department of Bacteriology, University of Edinburgh Medical School, Edinburgh, UK). *J Infect* 1981; **3**: 258-65.

Isolation of *Chlamydia trachomatis* from women with urethral syndrome
A WEIL, R GAUDENZ, L BURGENER, AND B SCHULTZ (University of Geneva, Geneva, Switzerland). *Arch Gynaecol* 1981; **230**: 329-34.

Cellular immune response during uncomplicated genital infection with *Chlamydia trachomatis* in humans
RC BRUNHAM, DH MARTIN, CC KUO, *ET AL* (United States Public Health Service Hospital, Seattle, WA, USA). *Infect Immun* 1981; **34**: 98-104.

Cystitis associated with chlamydial infection of the genital tract in male guinea pigs
RG RANK, HJ WHITE, BL SOCOFF, AND AL BARRON (Department of Microbiology and Immunology, University of Kansas, Little Rock, Arkansas, USA). *Sex Transm Dis* 1981; **8**: 203-10.

In-vitro activity of clindamycin against *Chlamydia trachomatis*
WR BOWIE (Vancouver General Hospital, Vancouver, BC, Canada). *Sex Transm Dis* 1981; **8**: 220-2.

The prevalence of *Ureaplasma urealyticum* and *Mycoplasma hominis* in the cervix and anal canal of women
PE MUNDAY, PM FURR, AND D TAYLOR-ROBINSON (Clinical Research Centre, Harrow, Middlesex, UK). *J Infect* 1981; **3**: 253-7.

Isolation of *Chlamydia trachomatis* from the urethra and from the prostatic fluid in men with signs and symptoms of acute urethritis
S NILSSON, G JOHANNISSON, AND E LYCKE (Department of Urology, Gothenburg University, Gothenburg, Sweden). *Acta Derm Venereol* 1981; **61**: 456-8.

Sclerosing lymphangitis of the penis: a possible chlamydial aetiology
JK KRISTENSEN AND J SCHEIBEL (University Institute of Biology and Chemistry, Copenhagen, Denmark). *Acta Derm Venereol* 1981; **61**: 455.

Infection with *Chlamydia trachomatis*, *Mycoplasma hominis*, and *Neisseria gonorrhoeae* in patients with acute pelvic inflammatory disease
BR MØLLER, P-A MÅRDH, S AHRONS, AND E NÜSSLER (Aarhus University, Aarhus, Denmark). *Sex Transm Dis* 1981; **8**: 198-202.

Acute salpingitis with *Chlamydia trachomatis* isolated from fallopian tubes: clinical, cultural, and serologic findings
L SWENSSON, L WESTRÖM, AND P-A MÅRDH (University of Lund, Sweden). *Sex Transm Dis* 1981; **8**: 51-5.

Ten patients, from whose fallopian tubes *Chlamydia trachomatis* was isolated at laparoscopy, were assessed for clinical symptoms and signs and microbiological findings. Five patients presented with irregular bleeding, nine with increased vaginal discharge, and two with urinary symptoms. The onset of pelvic pain varied from insidious to more acute with a duration ranging from three to 27 days. It had been thought that chlamydia-associated salpingitis could run a relatively benign course. One patient aged 18 years (median age of group, 19 years) had a rectal temperature of more than 38°C.

Although two patients complained of only brief pelvic pain (four days' duration), severe inflammatory changes were present on laparoscopy with pelvic peritonitis or abscess formation with closed ostia or both. A further five patients had moderate inflammation with adhesions and ESR ranging between 10 to 90 mm/first hour. The remaining three patients had only mild inflammation. The four patients using intrauterine contraceptive devices did not have more pronounced signs or symptoms than three others using oral contraception.

Although *C trachomatis* was not isolated from the cervix in two patients, it was still grown from the fallopian tubes. Serological tests showed a rise in chlamydial IgG antibody titres in six out of eight patients. IgM antibodies were found in only two patients; previous chlamydial urogenital infections probably accounted for this sparsity.

Cervical *Mycoplasma hominis* was detected in one patient. In another,

stationary antibody titres (IHA) were noted, but four patients examined for *Mycoplasma hominis* in the fallopian tubes had negative results. *Bacteroides* species were also excluded when samples were taken from either the tubes or the utero-rectal pouch.

Two patients had positive culture results for *N gonorrhoeae* from the cervix with accompanying antibodies (IHA) to gonococcal pili. These patients were admitted after three days of pelvic pain and had negative results for *N gonorrhoeae* from the fallopian tubes. One of these patients had stationary antibody titres to *C trachomatis* and mild inflammation on laparoscopy but nevertheless harboured chlamydia in the tubes. The authors have therefore shown that in clinical practice this finding, together with a negative cervical culture result for *C trachomatis,* is not incompatible with an underlying salpingitis of chlamydial origin.

J M Harvey

Trichomoniasis

Metronidazole metabolism in cultures of *Entamoeba histolytica* and *Trichomonas vaginalis*

BB BEAULIEU, JRMA McLAFFERTY, RL KOCH, AND P GOLDMAN (Harvard University School of Medicine, Boston, Massachusetts, USA). *Antimicrob Agents Chemother* 1981;**20:**410-4.

It has long been known that metronidazole is not itself active but that after being taken up by the target organism it is reduced to an active metabolite which actually causes cell death. This metabolite itself is too labile to be isolated and characterised, but plausible structures for it suggest that it should react with water to give a stable and detectable product acetamide. In this paper the authors, having previously shown that acetamide is produced by the incubation of anaerobic bacteria with metronidazole, demonstrated that 2 ^{14}C metronidazole added to cultures of *Entamoeba histolytica* led to the formation of ^{14}C-labelled acetamide. They then incubated two strains of *Trichomonas vaginalis* (one, IR78, metronidazole-resistant) under aerobic conditions with ^{14}C-labelled metronidazole and showed that the drug-resistant strain produced rather less acetamide than the sensitive strain. No quantitative studies were possible when the experiments were repeated under anaerobic conditions (when both strains are sensitive to metronidazole), but both strains seemed to produce about the same (2-4 times larger) quantities of acetamide.

Although the figures in this paper do not show dramatic differences they are at least compatible with the hypothesis that metronidazole resistance in *T vaginalis* is accompanied by reduced production of the active metabolite.

J P Ackers

In-vitro sensitivity of *Trichomonas vaginalis* to zinc

WA GARDNER Jr, CE O'HARA, J BAILEY, AND BD BENNET (University of Southern Alabama, Mobile, Alabama, USA). *Prostate* 1981;**2:**323.

Activation of the alternative complement pathway of *Trichomonas vaginalis*

FD GILLIN AND A SHER (Parasitic Disease Laboratory, NIAID, Bethesda MD, USA). *Infect Immun* 1981;**34:**268-73.

Candidosis

A corticosteroid binding protein and endogenous ligand in *C albicans* indicating a possible steroid receptor system

DL LOOSE, DJ SCHURMAN, AND D FELDMAN (Stanford University Medical Center, Stanford, California, USA). *Nature* 1981; **293:**477-8.

Precipitation tests in candidiasis

PG SHIVANANDA, JN SARVAMANGALA, AND KNA RAO (Kasturba Medical College, Manipal, India). *Ind J Med Res* 1981;**74:** 358-64.

Treatment of vulvovaginal candidiasis with boric acid powder

KK VAN SLYKE, VP MICHEL, AND MF REIN (University of Virginia, School of Medicine, Charlottesville, Virginia, USA). *Am J Obstet Gynecol* 1981;**141:**145-8.

A double-blind comparison was made of the use of 14 daily intravaginal gelatin capsules containing 600 mg of boric acid powder versus the use of identical capsules containing 100 000 U nystatin diluted to volume with cornstarch for the treatment of vulvovaginal candidiasis. Cure rates for boric acid were 92% at 7-10 days after treatment and 72% at 30 days, whereas the nystatin cure rates were 64% at 7-10 days and 50% at 30 days. The speed of alleviation of signs and symptoms was similar with the two drugs. There were no untoward side effects, and cervical cytological features were not affected. In-vitro studies found boric acid to be fungistatic and its effectiveness to be unrelated to pH. Blood boron analyses indicated little absorption from the vagina and a half-life of less than 12 hours. Acceptance by the patients was better than for 'messy' vaginal creams, and self-made capsules containing boric acid powder are inexpensive compared with the costly medication commonly prescribed.

Authors' summary

Genital herpes

Induction of uterine cancer with inactivated herpes simplex virus types 1 and 2

WB WENTZ, JW REAGAN, AD HEGGIE, *ET AL* (Case Western Reserve University, Cleveland, Ohio, USA). *Cancer* 1981;**48:** 1783-90.

Other sexually transmitted diseases

The etiology of anorectal infections in homosexual men

TC QUINN, L COREY, RG CHAFFEE, *ET AL* (University of Washington, Seattle, USA). *Am J Med* 1981;**71:**395-406.

A study was carried out of 52 homosexual men over a period of 42 months who complained of symptomatic anorectal disease and gave no recent history of having been contacts of men with known urethral gonorrhoea. Investigations included a Gram stain of rectal exudate (not mentioned if taken by direct proctoscopy), urethral, pharyngeal, and rectal cultures for *Neisseria gonorrhoeae,* rectal cultures for herpes simplex virus (HSV), serological tests for syphilis (VDRL), and in certain cases stool cultures for *Salmonella, Shigella, Chlamydia trachomatis,* and *Campylobacter foetus* ssp, and stool examination for ova and parasites. In the latter part of the study sigmoidoscopy was performed on 22 men, rectal biopsy being performed if abnormal findings were present. Biopsy specimens were cultured for HSV, *N gonorrhoeae, C trachomatis,* and bacterial enteric pathogens and a specimen

obtained for examination for ova and parasites. Biopsy specimens were also sent for histology.

The men's ages ranged from 18-41 years (mean 26·4 years); 90% were white; and all give a history of anilingus, fellatio, or anoreceptive homosexual intercourse. The number of sexual partners ranged from one to 11 (mean 6·1) a month. Their symptoms were as follows: anal discharge, 89%; rectal pain, 87%; diarrhoea, 48%; constipation, 42%; bloody stools, 37%; tenesmus, 35%; abdominal pain, 35%; fever, 27%; and pruritus ani, 10%.

HSV was found in 15 (29%) of 52 men, the majority complaining of ano-rectal pain; focal ulceration was present. Despite negative results for Gram staining seven (14%) had rectal gonorrhoea; six (12%) had syphilis, two having anal specimens which gave positive results by darkfield microscopy. Four harboured enteric pathogens: two *Entamoeba histolytica,* two *Giardia lamblia,* and one *Campylobacter foetus* ssp *jejuni* (concomitant enteric pathogen infection occurred in the group). *C trachomatis* (LGV-2 strain) was isolated from one patient with severe granulomatous proctitis. Six (12%) patients had anal condylomata acuminata. One or more pathogens were identified in 28 (67%) of 42 men who had anorectal leucocytic exudate and in two of 10 who did not. In 13 (52%) of 25 in the first part of the study and in nine (33%) of 27 in the latter part, no pathogens were found.

Of the remaining 27 patients, 22 underwent sigmoidoscopy; 10 had sigmoidoscopic or histological evidence, or both, of acute proctitis, and eight of the remaining 12 had polymorphonuclear leucocytes in rectal specimens. An infectious pathogen was found in 13 (72%) of 18 with proctitis or anorectal leucocytes or both and in none of four with apparently normal mucosa and no leucocytes.

The remainder of the study reviews recent literature on anorectal gonorrhoea, HSV infection, syphilis, and enteric pathogen infections together with case studies illustrating features, anorectal chlamydial infection, and other causes of anorectal disease in homosexuals. (The bibliography is one of the most thorough yet on recent work on homosexually transmitted infections).

Michael Waugh

Treatment of chancroid

JE FITZPATRICK, H TYLER, AND ND GRAMSTAD (Fitzsimons Army Medical Center, Aurora Co, USA). *JAMA* 1981;**246:**1804-5.

Thirty-five men with chancroid were randomly treated with oral sulphisoxazole, sulphisoxazole and tetracycline, sulphamethoxazole-trimethoprim, or intramuscular streptomycin. The highest cure rates were obtained in 13 of 13 patients treated with streptomycin and in 10 of 10 patients treated with sulphamethoxazole-trimethoprim. Only seven of nine patients treated with sulphisoxazole and five of eight treated with sulphisoxazole and tetracycline were cured. The authors conclude that the sulphamethoxazole-trimethoprim combination is as efficacious as streptomycin and probably superior to sulphisoxazole and tetracycline in the treatment of chancroid.

Authors' summary

Malignant transformation of perianal condylomata acuminata. A case report with review of the literature

SH LEE, DH McGREGOR, AND MN KUZIEZ (Veterans Administration Medical Center, Kansas City, USA). *Dis Colon Rectum* 1981;**24:**462-7.

Penile condylomata acuminata: an experimental model for evaluation of topical self treatment with 0·5%-1·0% ethanolic preparations of podophyllotoxin for three days

G von KROGH (Sodersjukhuset, S-10064 Stockholm, Sweden). *Sex Transm Dis* 1981;**8:**179-86.

Treatment of chancroid with erythromycin

JL CARPENTER, A BACK, D GEHLE AND T OBERHOFFER (Brodie Army Medical Center, Houston, Texas, USA). *Sex Transm Dis* 1981;**8:**192-7.

Molluscum contagiosum

ST BROWN, JF NALLEY, AND SJ KRAUS (Center for Disease Control, Atlanta, Georgia, USA). *Sex Transm Dis* 1981;**8:**227-34.

Infant pneumonitis associated with cytomegalovirus, chlamydia, pneumocystis, and ureaplasma: a prospective study

S STAGNO, DM BRASFIELD, MB BROWN, *ET AL* (Department of Pediatrics, University of Alabama, Birmingham, Alabama, USA). *Pediatrics* 1981;**68:**322-9.

Public health and social aspects

Infections due to penicillinase-producing *Neisseria gonorrhoeae* in the United States 1976-1980

HW JAFFE, JW BIDDLE, SR JOHNSON, AND P WIESNER (Center for Disease Control, Atlanta, Georgia, USA). *J Infect Dis* 1981;**144:**191-7.

Penicillinase-producing *Neisseria gonorrhoeae* in Canada

JR DILLON, M PAUZE, AND AG JESSAMINE (Laboratory Center for Disease Control, Ottawa, Canada). *Can Med Assoc J* 1981; **125:**851-6.